**WHAT IS CLAIMED:**

1. An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a proteinaceous molecule or biological equivalent, wherein the encoded proteinaceous molecule or biological equivalent has a predicted peptide sequence homologous to a subset of a CD2 family of receptors, a predicted length of about 335 amino acids; a predicted intracellular domain of about 85 amino acid residues; a predicted extracellular domain of about 225 amino acid residues; and a predicted single transmembrane domain of about 25 amino acid residues.

2. The isolated nucleic acid molecule of claim 1, wherein the nucleic acid sequence comprises nucleotides of SEQ ID NO 1

3. The isolated nucleic acid molecule of claim 1, wherein the encoded proteinaceous molecule or biological equivalent comprises a CS1 receptor.

4. The isolated nucleic acid molecule of claim 1, wherein the encoded proteinaceous molecule or biological equivalent comprises an amino acid sequence or partial sequence of SEQ ID NO 2.

5. The isolated nucleic acid molecule of claim 1, wherein the encoded proteinaceous molecule or biological equivalent has seven putative N-linked glycosylation sites.

6. The isolated nucleic acid molecule of claim 1, wherein the encoded proteinaceous molecule or biological equivalent has two tyrosine motifs.

7. The proteinaceous molecule or biological equivalent of claim 6, wherein a formula for the tyrosine motif comprises:

(-T-x-Y-x-x-I/V/A-), wherein the formula for the tyrosine motif represents a D-or L-isomer of ("x") equals any amino acid; ("Y") equals a tyrosine amino acid; ("T") equals a tryptophan amino acid, ("A") equals an alanine amino acid, ("V") equals a valine amino acid, ("I") equals an isoleucine amino acid.

8. An isolated proteinaceous molecule or biological equivalent comprising a synthetic or recombinant polypeptide of a cell surface receptor that is homologous to a subset of a CD2 family of receptors with a predicted length of about 335 amino acids; a predicted intracellular domain of about 85 amino acid residues; a predicted extracellular domain of about 225 amino acid residues; and a predicted single transmembrane domain of about 25 amino acid residues.

9. The isolated proteinaceous molecule or biological equivalent of claim 8, wherein the proteinaceous molecule or biological equivalent comprises a peptide sequence of SEQ ID NO. 2

10. The isolated proteinaceous molecule or biological equivalent of claim 8, wherein the subset of the CD2 family of receptors comprises a CS1 receptor or its biological equivalent.

11. The isolated proteinaceous molecule or biological equivalent of claim 8, wherein the encoded proteinaceous molecule or biological equivalent has seven putative N-linked glycosylation sites.

12. The isolated proteinaceous molecule or biological equivalent of claim 8, wherein the encoded proteinaceous molecule or biological equivalent has two tyrosine motifs.

13. The isolated proteinaceous molecule or biological equivalent of claim 12, wherein a formula for the tyrosine motif comprises:

(-T-x-Y-x-x-I/V/A-), wherein the formula for the tyrosine motif represents a D-or L-isomer of ("x") equals any amino acid; ("Y") equals a tyrosine amino acid; ("T") equals a tryptophan amino acid, ("A") equals an alanine amino acid, ("V") equals a valine amino acid, ("I") equals an isoleucine amino acid.

14. A monoclonal antibody produced by:

(a) injecting an animal with a synthetic or recombinant proteinaceous molecule or biological equivalent of a natural killer cell surface receptor to produce an immunized animal;

(b) harvesting spleen cells from the immunized animal to give harvested spleen cells;

(c) fusing the harvested spleen cells with an immortal cell line to produce a fusion cell line;

(d) screening the fusion cell line to identify cells that specifically produce a monoclonal antibody with affinity toward the synthetic or recombinant proteinaceous molecule or biological equivalent; and

(e) selecting and expanding the fusion cell line only with cells that specifically produce the monoclonal antibody.

15. The monoclonal antibody of claim 14, wherein the immunized animal comprises a mouse.

16. The monoclonal antibody of claim 14, wherein the immortal cell line comprises a myeloma.

17. The monoclonal antibody of claim 14, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor has a predicted peptide sequence homologous to a subset of a CD2 family of receptors.

18. The monoclonal antibody of claim 14, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a CS1 receptor.

19. The monoclonal antibody of claim 14, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a peptide of about 25 to about 50 amino acid residues.

20. The monoclonal antibody of claim 19, wherein the peptide of about 25 to about 50 amino acid residues is linked to an immunological adjuvant.

21. The monoclonal antibody of claim 14, wherein the recombinant proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a fusion protein.

22. The monoclonal antibody of claim 21, wherein the fusion protein comprises CS1-GST.

23. The monoclonal antibody of claim 14, wherein the synthetic or recombinant proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a peptide sequence of SEQ ID NO. 2

24. The monoclonal antibody of claim 14, wherein the synthetic or recombinant proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises CS1.

25. A fusion cell line produce by:

(a) injecting an animal with a synthetic or recombinant proteinaceous molecule or biological equivalent of a natural killer cell surface receptor to produce an immunized animal;

(b) harvesting spleen cells from the immunized animal to give harvested spleen cells;

(c) fusing the harvested spleen cells with an immortal cell line to produce a fusion cell line;

(d) screening the fusion cell line to identify cells that specifically produce a monoclonal antibody with affinity toward the synthetic or recombinant proteinaceous molecule or biological equivalent; and

(e) selecting and expanding the fusion cell line only with cells that specifically produce the monoclonal antibody.

26. The fusion cell line of claim 25, wherein the immunized animal comprises a mouse.

27. The fusion cell line of claim 25, wherein the immortal cell line comprises a myeloma.

28. The fusion cell line of claim 25, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor has a predicted peptide sequence homologous to a subset of a CD2 family of receptors.

29. The fusion cell line of claim 25, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a CS1 receptor.

30. The fusion cell line of claim 25, wherein the synthetic proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a peptide of about 20 to about 50 amino acid residues.

31. The fusion cell line of claim 30, wherein the peptide of about 20 to about 50 amino acid residues comprises linked to an immunological adjuvant.

32. The fusion cell line of claim 25, wherein the recombinant proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises a fusion protein.

33. The fusion cell line of claim 32, wherein the fusion protein comprises CS1-GST.

34. The fusion cell line of claim 25, wherein the synthetic or recombinant proteinaceous molecule or biological equivalent comprises a peptide sequence of SEQ ID NO. 2

35. The fusion cell line of claim 25, wherein the recombinant proteinaceous molecule or biological equivalent of the natural killer cell surface receptor comprises CS1 a receptor.

36. A method to inhibit the growth of tumor cells comprising the steps of: contacting an effective amount of the monoclonal antibody of claim 14 with the natural killer cells, which leads to the activation of the natural killer cell, and inhibition of tumor cell growth.

37. The method of claim 36, wherein the monoclonal antibody comprises a CS1 proteinaceous molecule acting as a ligand for a CS1 receptor on natural killer cells, which leads to the activation of the natural killer cell, and inhibition of tumor cell growth.